

Integration with Moodle via LTI 2.0

Introduction

This guide utilises PebblePads LTI 2.0 integration and supports SSO, Memberships and Outcomes.

You should only consider using this type of integration if you are self-hosting Moodle or your host is able to make a code change to Moodle core as the following Moodle issues are preventing a complete level of integration with our platform.

- <https://tracker.moodle.org/browse/MDL-55940>
- <https://tracker.moodle.org/browse/MDL-55898>
- <https://tracker.moodle.org/browse/MDL-40761>

Known issues

- This document applies to Moodle versions post 3.5.4
- There are there Moodle tracker issues as above
- UK customers will only have the ATLAS tool registered for them via the tool proxy and will need to manually configure the Pebble+/Deep Linking tools following the LTI 1.0 documentation instructions
- The content item picker does not allow users to choose resources that have been shared with them

Links to external resources

- <https://docs.moodle.org/dev/Releases>

What can you do, what are the limitations of this implementation and what is not supported?

With this type of integration you **WILL** be able to:

- Single Sign On from Moodle to Pebble+
- Single Sign On from Moodle to ATLAS
- Create PebblePad accounts upon single sign on for new users
- Populate an ATLAS workspace members based on course enrolment
- Pass grades back to Moodle
- Create assets using Deep Linking and have them Auto Submitted to ATLAS.

The following limitations are in place:

- Register to use PebblePocket app if LTI is the only method of authentication
- Search for/share with users who haven't already logged into the system if LTI is the only method of authentication
- Synchronise to Sets
- Auto submit will pick the first workspace the learner is a member of when the content item has been added to multiple workspaces.

The membership's service takes into consideration the status of a user, the enrolment start date and the enrolment end date so only active and eligible users are synchronised.

Moodle will only accept grades passed back to it via the LTI link with a numeric value between 0 and 100.

Moodle's Grade Book will only show one grade per LTI link (Does not support multiple assignments in ATLAS) – the last grade released will be displayed. Multiple LTI links can be added to the one Moodle course, each linking to a different workspace.

Moodle follows the following rules for role mappings (MDL-40761):

- If a user is the Moodle site Administrator, their LTI Role is "Administrator"
- If a user is a teacher and can manage a course, their LTI Role is "Instructor"
- If none of the above, their LTI Role is "Learner". This role is typically a Student.

What's covered in this guide and what is not?

As with most systems there are a number of options that are visible to you but not all are used by our platform, therefore only those that are relevant to the tools configuration are referred to in this document.

The following tasks are covered in this guide

- Prerequisites
- Setting up Pebble+
- Setting up ATLAS
- Setting up Linking to Resources
- Testing the configuration

The following tasks are NOT covered in this guide

- Using the integration as an Instructor
- Using the integration as a Learner

Prerequisites

- Moodle 3.5.4 or above
- Your Moodle domain must be added to your PebblePads organisations content security policy
- A Pebble+ account with resources
- Administrative access to Moodle
- Write access to Moodle core
- Global Admin access to PebblePad
- Creator level access on a Region in ATLAS

Moodle core code changes

Please ensure you read through each of the bugs logged with Moodle to ensure that you are affected by them before making changes to your code.

Also ensure that you make a backup of any changes to yours files.

To ensure that a user's username is passed in the list of included capabilities you will need to edit the following file:

mod/lti/service/memberships/classes/local/service/memberships.php you'll need to add the following code to the \$includedcapabilities array.

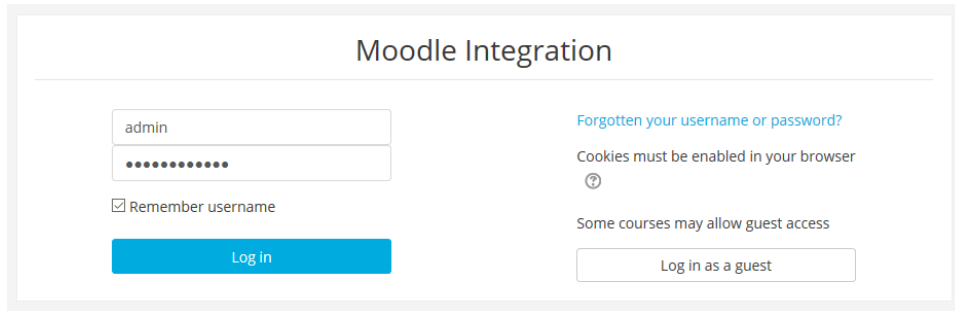
```
'User.username' => ['type' => 'id',  
'member.field' => 'ext_username',  
'source.value' => format_string($user->username)]
```

Updating your organisation content security policy

1. Using your Global Admin account log into your PebblePad test environment.
2. Click the burger menu then click **Additional settings** then **Administration** to launch the PebblePad Administration portal
3. Click **Settings** and scroll down to the **General** section and tick the **Content Security Policy header append** checkbox
4. Add your Moodle URL to the **Content Security Policy header whitelist** input box
5. Scroll to the bottom and press the **Update** button

Registration via Tool Proxy

1. Log into Moodle as an Administrator

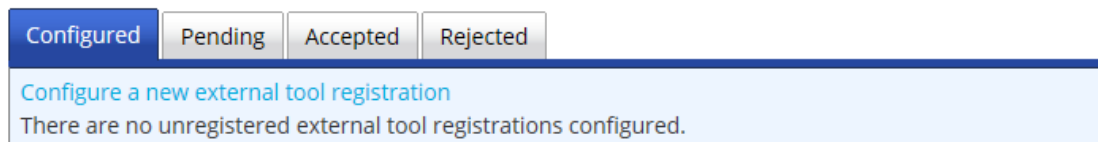


The screenshot shows the Moodle login interface. At the top, it says "Moodle Integration". Below this, there are two input fields: one for the username, which contains "admin", and one for the password, which is masked with dots. To the right of the password field, there is a link "Forgotten your username or password?". Below the password field, there is a checkbox labeled "Remember username" which is checked. A blue "Log in" button is positioned below the username and password fields. To the right of the "Log in" button, there is a message: "Cookies must be enabled in your browser" with a help icon. Below this message, there is another message: "Some courses may allow guest access". At the bottom right, there is a button labeled "Log in as a guest".

2. Click Site administration / Plugins / Activity modules / External tool / Manage tools / Manage external tool registrations

Manage external tool registrations

External tool registrations



The screenshot shows the "Manage external tool registrations" page. At the top, there are four tabs: "Configured" (which is selected and highlighted in blue), "Pending", "Accepted", and "Rejected". Below the tabs, there is a blue box with the text: "Configure a new external tool registration" and "There are no unregistered external tool registrations configured."

3. Click **Configure a new external tool registration** and complete the **External tool configuration** as follows

Please note that only the options that are relevant to the tools configuration are detailed below.

Registration options	
Tool provider name	PebblePad
Registration URL	Test: https://apptest.pebblepad.com/admin/org-url/lti/registerlti Your org-url can be seen in the URL from the main login page, for example https://apptest.pebblepad.com/login/org-url
Capabilities	Select All
Services	Select All

4. Click **Save changes**
5. Click on the tick in the **Action** column to launch the registration process.

Configured	Pending	Accepted	Rejected
Configure a new external tool registration			
Name	Registration URL	Created on	Action
PebblePad	https://apptest.pebblepad.com/admin/moodle/lti/registerlti	2/03/17	✓ ⚙ ✕

- Select your **Organisation** from the drop down list and enter the username and password you were provided with by Support and click the **Login** button.

External tool registration

PebblePad Admin

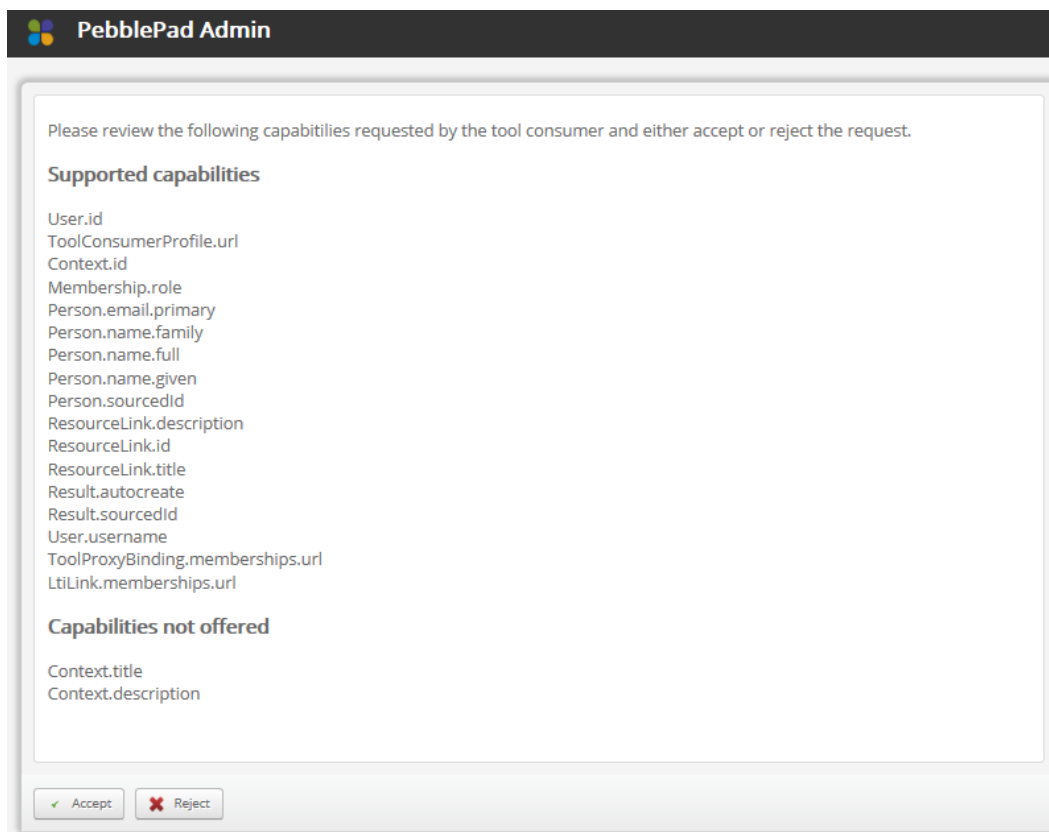
Login

Organisation



Username

Password

7. Click on the **Accept** button and you will be redirected back to Moodle's **Manage external tool registrations** page.

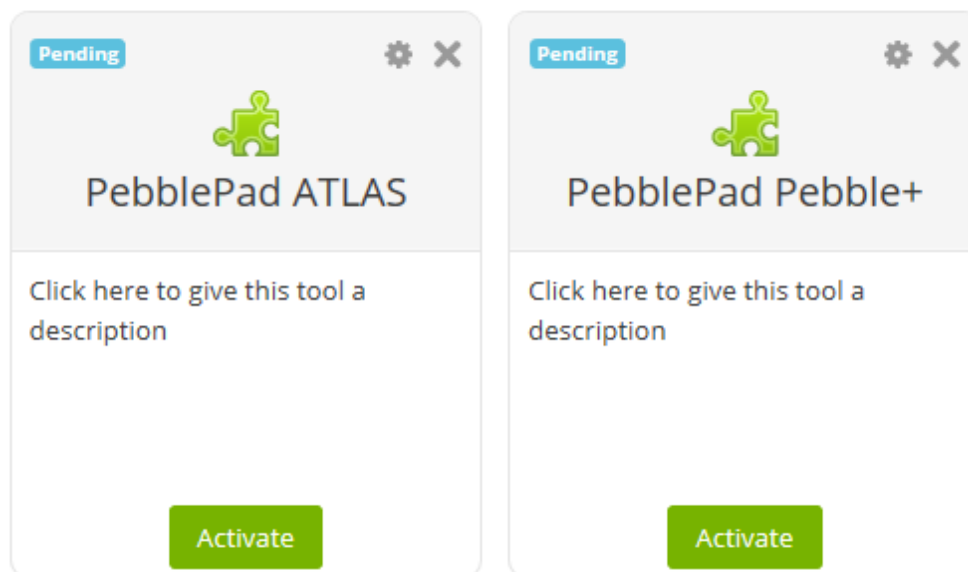


8. Click on the **Accepted** tab to see the successful tool registration

Name	Registration URL	Created on	Action
PebblePad	https://apptest.pebblepad.com/admin/moodle/lti/registerlti	2/03/17	 

9. Navigate to **Site administration / Plugins / Activity modules / External tool / Manage tools** and you will see the newly created tools in a pending state.

Tools



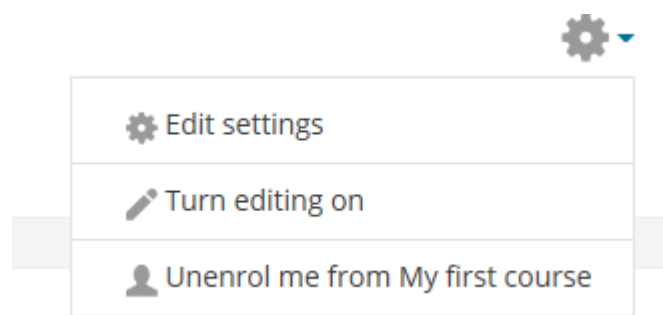
10. Click on each of the **Activate** buttons to activate the tools.
11. Edit each of the tools and change the follow settings.

Tool settings	
Default launch container	New window

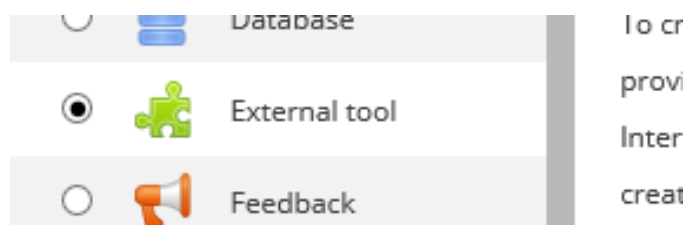
Testing the configuration

Pebble+

1. Navigate to a course from your **My courses** menu
2. Click on the cog icon and click **Turn editing on**



3. Click **Add an activity or resource**
4. Click **External tool** then **Add**

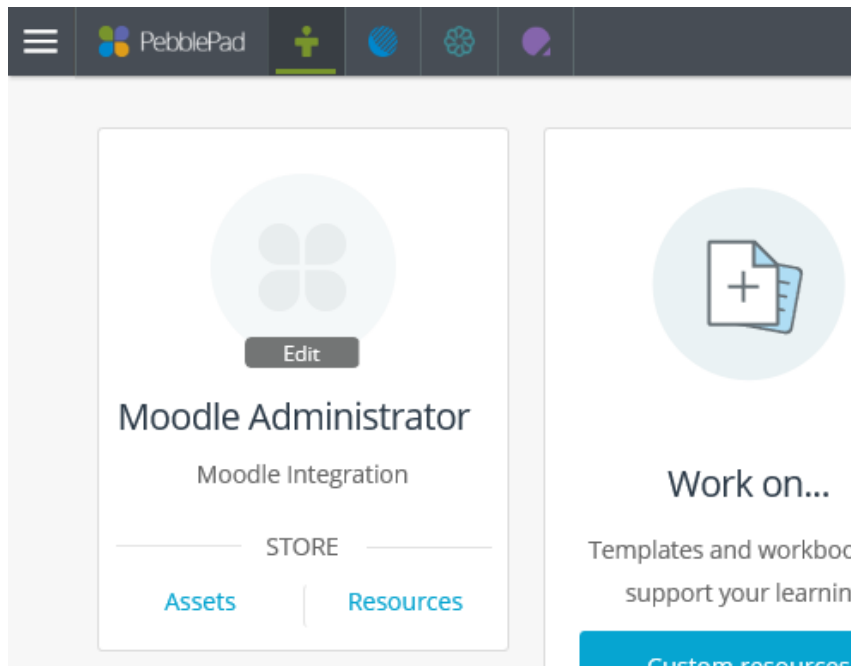



5. Complete the **Adding a new External tool** as follows

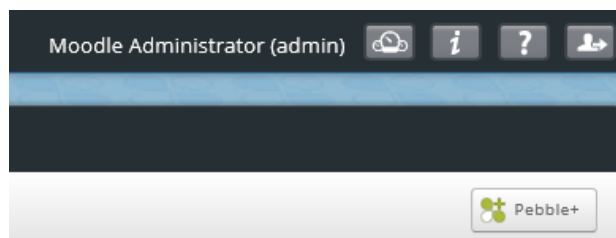
General	
Activity name	SSO
Preconfigured tool	PebblePad Pebble+

6. Click **Save and return to course**

7. Click on the newly create **SSO** activity link and you should be signed into Pebble+, if the tool has been configured successfully you should see your Moodle Forename and Surname on the profile tile.

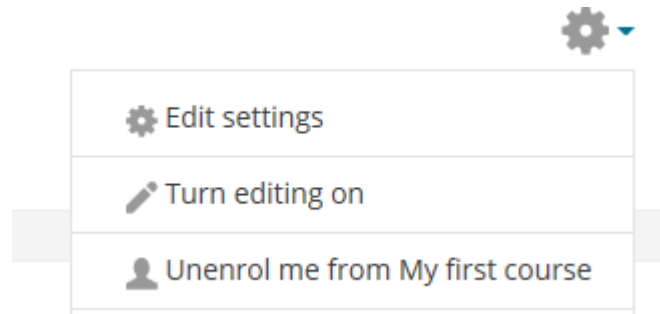


8. Finally click on the ATLAS  icon to launch ATLAS and check that your username is correct. If you see your Moodle username then the tool has been configured successfully. If you see a number then you are missing the custom launch parameter.

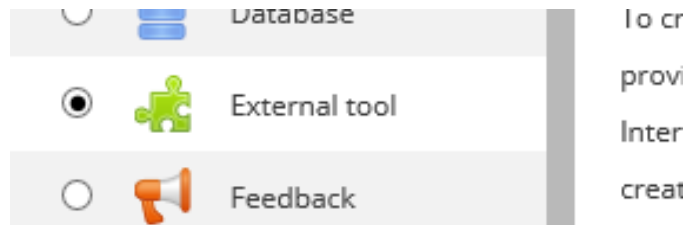


ATLAS

1. Navigate to a course from your **My courses** menu
2. Click on the cog icon and click **Turn editing on**



3. Click **Add an activity or resource**
4. Click **External tool** then **Add**



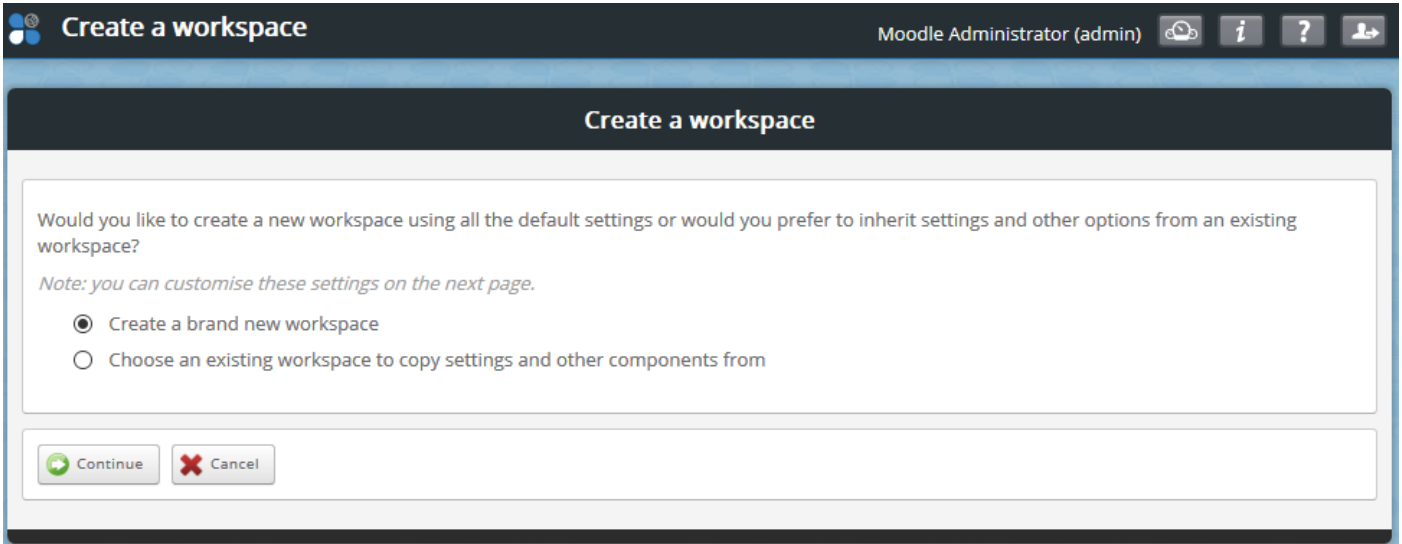
5. Complete the **Adding a new External tool** as follows

General	
Activity name	My first assignment
Preconfigured tool	PebblePad ATLAS

6. Click **Save and return to course**

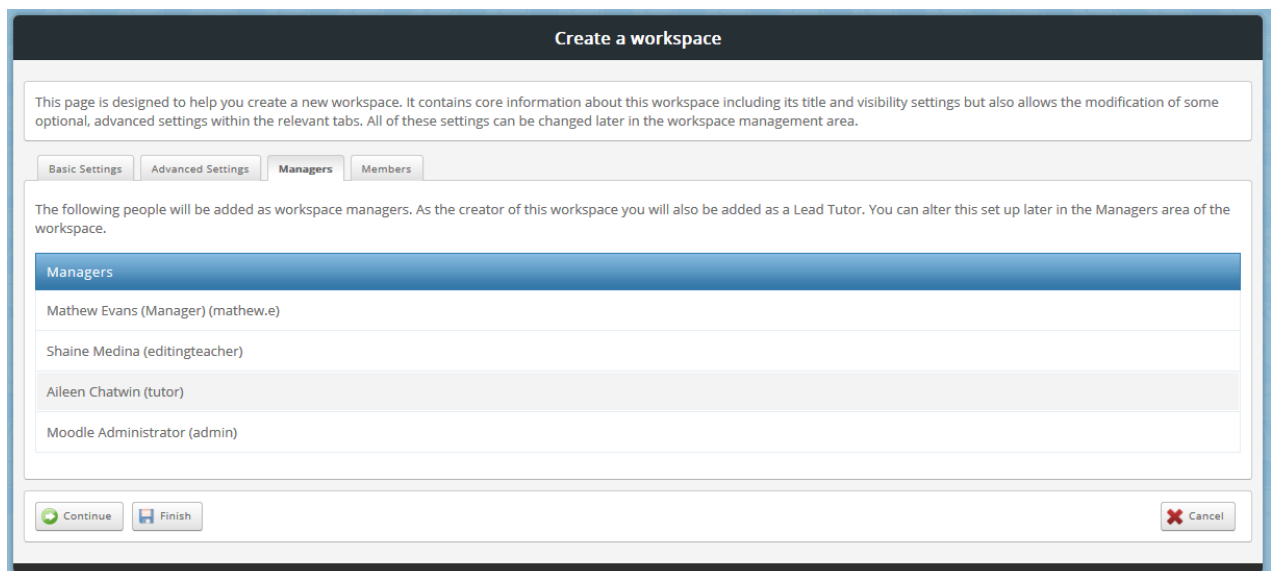
- Click on the newly created **My first assignment** activity link and you should be signed into ATLAS, if the tool has been configured successfully you should see your Moodle username at the top right of the screen and be presented with **Create a workspace** wizard.

As per the prerequisites you need to have at least Creator level access on a Region or be a Region Manager in ATLAS. If not you will be redirected to the ATLAS dashboard instead of seeing the wizard.



The screenshot shows the 'Create a workspace' wizard interface. At the top, it says 'Create a workspace' and 'Moodle Administrator (admin)'. The main heading is 'Create a workspace'. The question asks: 'Would you like to create a new workspace using all the default settings or would you prefer to inherit settings and other options from an existing workspace?'. A note below says: 'Note: you can customise these settings on the next page.' There are two radio button options: 'Create a brand new workspace' (which is selected) and 'Choose an existing workspace to copy settings and other components from'. At the bottom, there are 'Continue' and 'Cancel' buttons.

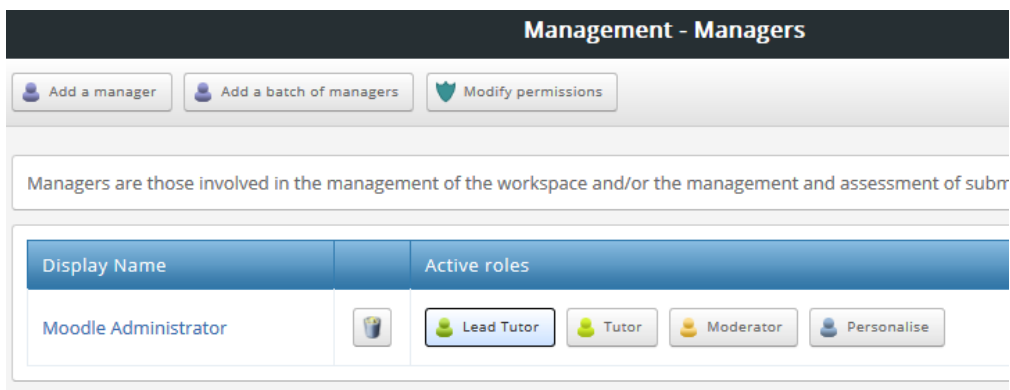
- Click **Continue** to create a brand new workspace.
- Notice that there is a **Managers** tab and a **Members** tab. If you can see these then you know that the membership's service connection is working. If you don't see these tabs then ensure that your Moodle install is publically accessible and you are not running on a localhost.
- Click the **Managers** tab and check that you can see your course instructors.
- Click the **Members** tab and check that you can see your course learners.



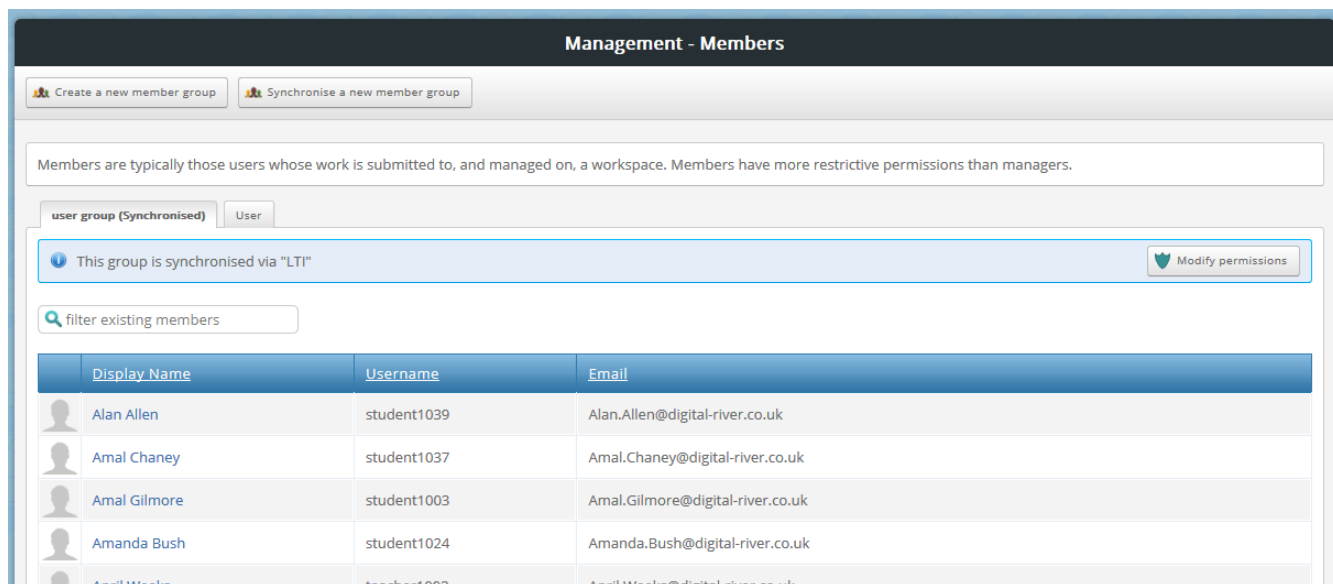
The screenshot shows the 'Create a workspace' wizard interface with the 'Managers' tab selected. The text says: 'This page is designed to help you create a new workspace. It contains core information about this workspace including its title and visibility settings but also allows the modification of some optional, advanced settings within the relevant tabs. All of these settings can be changed later in the workspace management area.' Below this, there are tabs for 'Basic Settings', 'Advanced Settings', 'Managers', and 'Members'. A message states: 'The following people will be added as workspace managers. As the creator of this workspace you will also be added as a Lead Tutor. You can alter this set up later in the Managers area of the workspace.' A table lists the managers: Mathew Evans (Manager) (mathew.e), Shaine Medina (editingteacher), Aileen Chatwin (tutor), and Moodle Administrator (admin). At the bottom, there are 'Continue', 'Finish', and 'Cancel' buttons.

- From the **Basic Settings** tab change the workspace to start in **Active mode** and Click **Finish**.

Click the **Managers** tab under **Management** and check that the instructor accounts have been added as a **Lead Tutor**.

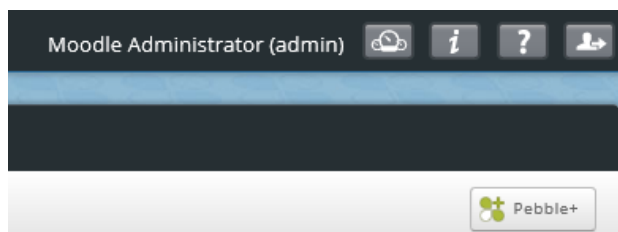


13. Click the **Members** tab under **Management** and check that a synchronised group has been created and all of the student accounts have been added.



Please note that the synchronisation of members will occur each time an Instructor (and only an Instructor) clicks the ATLAS link.

14. Check that you can see your Moodle username at the top right of the screen.



15. Click **Assignments** under **Management** and **Allow direct file uploads** and click the **Save** button

Allow direct file uploads

Submissions will be accepted by file upload and may be restricted to specific file types

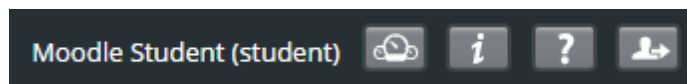
 File uploads are limited to 500MB per submission and may require downloading before being viewed

Accept all types of file

Restrict submissions to specific file types

Please note that enabling file uploads is a step that you will be taking as the Moodle Administrator to test the integration is working correctly and isn't a requirement of the integration.

16. Now log into Moodle as a student and click on the **My first assignment** activity link. You should be logged into ATLAS and land on the **About** page. You should be able to see your Moodle username at the top right of the screen.



17. Click the **Submissions** tab and click **Upload a file**

18. Press the **Continue** button

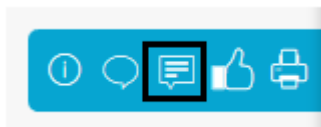
19. Click **Select file**, browse and select a file for upload

20. Enter a **Title**, check the **I am entitled to upload this file...** disclaimer and press the **Confirm** button

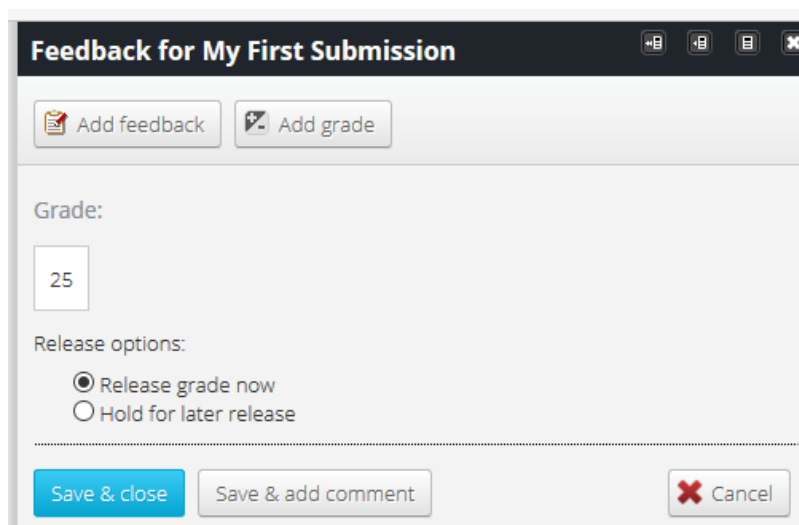
21. Once the file has uploaded switch back to your Admin account and log back into ATLAS.

22. Click the **Submissions** tab and open up the file submission.

23. Click on the leave Feedback button and click **Add grade**



24. Enter a grade into the **Grade** textbox. Notice that you can only enter a numeric value between 0 and 100.

A dialog box titled 'Feedback for My First Submission' with a dark header. Below the title are two buttons: 'Add feedback' and 'Add grade'. The 'Add grade' button is active. Below these buttons is a 'Grade:' label followed by a text input field containing the number '25'. Underneath is the 'Release options:' section with two radio buttons: 'Release grade now' (selected) and 'Hold for later release'. At the bottom are three buttons: 'Save & close' (blue), 'Save & add comment' (grey), and 'Cancel' (red with an X).

25. Click the **Save & close** button to release the grade back to Moodle.

26. From Moodle click on the **Grades** tab. Notice that the grade you entered in ATLAS is now in the corresponding activity link column.

Grader report

View Setup Scales Letters Import Export

Grader report Grade history Outcomes report Overview report Single view User report

All participants: 1/1

First name : **All** A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

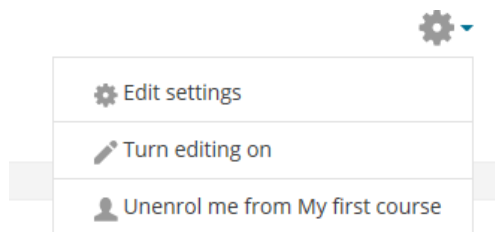
Surname : **All** A B C D E F G H I J K L M N O P Q R S T U V W X Y Z

			My first course 	
Surname 	First name	Email address	 My First Assignment  	Σ Course total  
 Moodle Student	 	moodle_student@digital-river.co.uk	25	-
Overall average			-	-

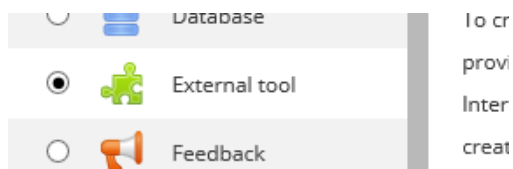
Content Item

Choosing a resource

1. Navigate to a course from your **My courses** menu
2. Click on the cog icon and click **Turn editing on**



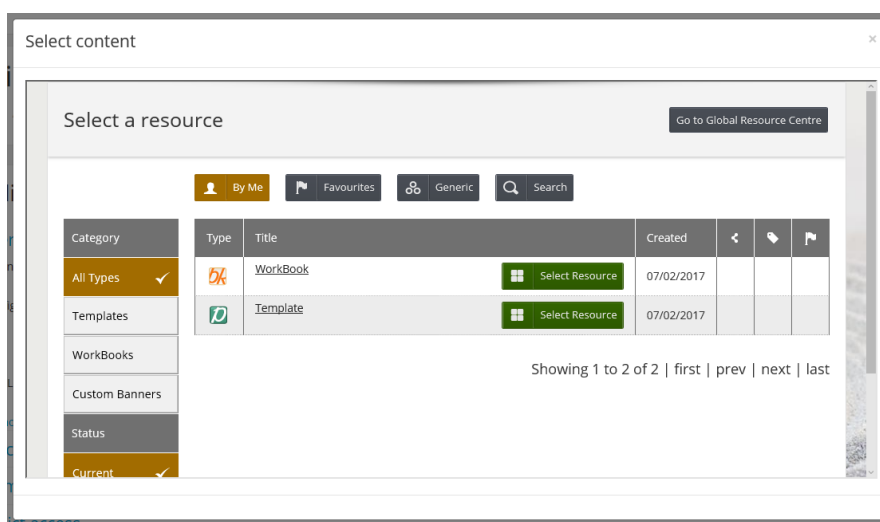
3. Click **Add an activity or resource**
4. Click **External tool** then **Add**



5. Complete the **Adding a new External tool** as follows

General	
Activity name	My Pebble+ resource
Preconfigured tool	Pebble+

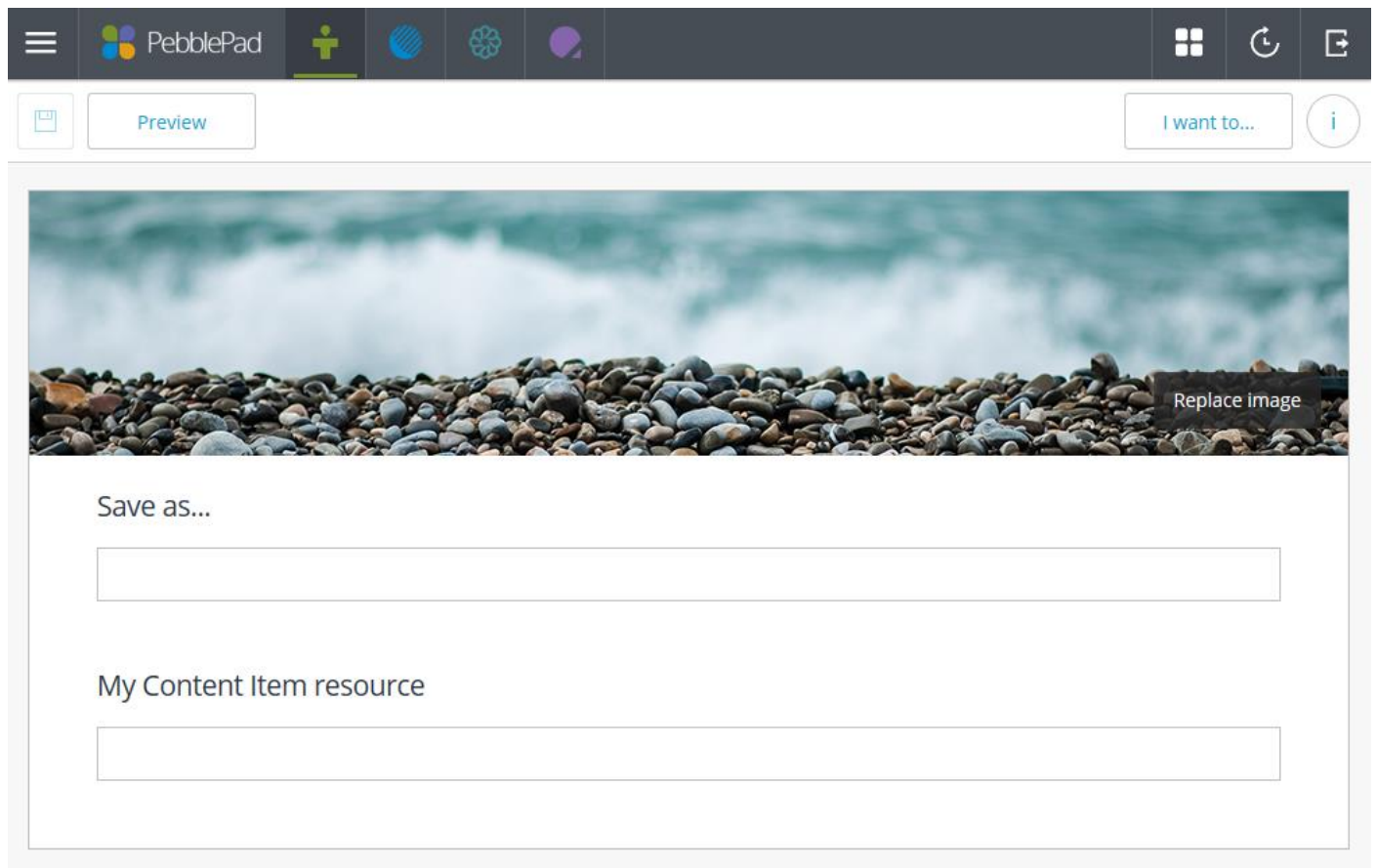
6. Click the **Select content** button and a popup modal will show you a list of all of your Pebble+ resources. Click on **Select Resource** for the resource you would like to test with and you will automatically be redirected back to Moodle.



7. Click **Save** and return to course

Using a resource

Log in as a student and click the **My Pebble+ resource** activity link and you should be logged into Pebble+ and presented with the selected resource in edit mode.



The screenshot shows the PebblePad interface in edit mode. At the top is a dark navigation bar with the PebblePad logo and several icons. Below this is a light-colored toolbar with a 'Preview' button and an 'I want to...' button. The main content area features a large image of a rocky beach with waves in the background. A 'Replace image' button is overlaid on the bottom right of the image. Below the image, there are two text input fields: the first is labeled 'Save as...' and the second is labeled 'My Content Item resource'.